

W. P. Clarke, Belleville, Ont.

September 27, 1893.

Has been fishery overseer for 3 years of that part of the Bay of Quinté extending from Deseronto to Trenton, on both sides.

Four kinds of fishing are carried on in this district, viz: with hoop nets, seines, gill nets, and night lines.

The herring do not come up into this district before the middle of October, and it is generally later. Most fishing is done during November for this species. It remains here more or less until the ice forms, after which no fishing is done. An occasional specimen only is taken in the spring, when fishing for other things. The early spring netting all stops by April 15.

The herring average about 100 fish to 45 pounds. Their range in length is probably

from 10 to 14 inches.

They come to this region to spawn, but are given no protection by law.

Most of the herring here are caught in seines, which are used the entire length of the district on both sides. The outer limit of the hauling grounds is about 18 feet, which is also the average of the deepest water in this district. The shore is bordered with lime stone. As soon as you pass beyond this lime stone, the bottom nearly everywhere consists of a soft black mud.

The seines measure from 30 to 40 rods long, and 13 to 14 feet deep in the bunt. The mesh is 2 $\frac{1}{2}$ inch (ext.) in the bunt, increasing to 4 inches in the wings. The herring would pass through any larger mesh than this. The Government had intended to enlarge the mesh, but the Minister of Fisheries was in Belleville a few days ago, and the matter being

brought to his attention, it is possible that they may extend the time during which the present mesh may be used.

Do not begin to use the seines until about October 15. They now stop using them November 1, and if December is favorable may fish some in that month, but the ice begins to form about December 10.

Previous to 1892 the seines were employed through November.

Many whitefish are taken in the seines, and this was especially the case when they were used during November.

Seining is carried on both day and night. In some places they do best at night, and most of the seining is done in the night time. The season is so short that every effort is put forth to make the best of it.

All gill nets for herring are set in the Big Bay, which ends about 8 miles above Deseronto. They are prohibited in the Little

Bay, which is that part above Big Bay.

The mesh of the gill nets measures from $2 \frac{1}{2}$ to $2 \frac{3}{4}$ inches (ext.). They are about 3 feet deep. The length varies, but about 1 pound of netting (Scotch linen) is used for a net.

Each license limits the amount of netting to a person to 100 rods, but no one can tell how much is actually used.

They are set in depths of 10 to 18 feet approximately.

The new regulation, taking effect this year, requires that the mesh of gill nets shall measure not less than $3 \frac{1}{8}$ inch. The regulation size hitherto has been $3 \frac{1}{4}$ inch, but notwithstanding this they have been using only $2 \frac{1}{2}$ to $2 \frac{3}{4}$ inch mesh.

With $3 \frac{1}{8}$ and $3 \frac{1}{4}$ inch mesh they would catch many whitefish, including the smallest sizes which come into these waters, namely $1 \frac{1}{2}$ to $1 \frac{3}{4}$ pounds.

With 2 $1\frac{1}{2}$ to 2 $\frac{3}{4}$ inch mesh, used at present, they catch no whitefish, unless it may be an occasional one which becomes entangled by one of its fins. The mesh is too small for them to gill regularly.

The 3 $1\frac{1}{8}$ to 3 $1\frac{1}{4}$ inch mesh would let through all the sizes of herring which come into this part of the Bay, but they have never used those sizes.

No small whitefish come into this part of the bay, only the adults which come up to spawn.

The use of 2 $1\frac{1}{2}$ to 2 $\frac{3}{4}$ inch mesh gill nets during November would, therefore, cause no injury to the whitefish.

He contends, therefore, that the smaller mesh gill nets are the preferable ones for this district. They will take only herring, while the larger ones would take whitefish also.

The mesh of the herring gill nets should

be 2 $1/2$ to 2 $3/4$ inches to protect the whitefish. The latter size might afford some protection to the herring, but anything larger would let all the herring through.

None of the gill net and seine fishermen are wholly dependent on that method of fishing. Some of them use hoop nets, but the majority are also farmers.

The herring are all salted and sold in the neighboring region. They are put up in half barrels, holding about 225 fish each, which sell at \$3. to \$3.50 a half barrel.

They never see any young herring in this region.

The whitefish run into this part of the bay practically with the herring. They may arrive 2 or 3 days ahead, but when first seen, they reckon on seeing the herring very soon afterwards. They are taken with the herring in the seines. Only the one kind of seine is used here.

used here.

The gill nets for whitefish are the same that are used outside, the mesh being 4 $\frac{1}{2}$ in.

The whitefish average about 3 pounds in weight. They run up to 8 pounds, but there are not many of that size.

Never saw any spawn running from them in October, but has seen spawn running in November.

The whitefish spawn in 18 inch to 3 feet of water, on the rocks along the border of the shores---flat limestone ledges, with many crevices. They can be seen thick in such places sometimes in November. Has seen them himself; never in the day time, but at night, by means of a lantern. Can also hear the slatting of their tails.

It is also possible that they may spawn in deeper water than that mentioned, but it is not possible to observe them below 3 feet. Has never looked for the eggs, but has seen the fish as described when out looking to see if

any fishing was going on.

They may be observed during about 3 nights spawning as above, when the height seems to have passed, although a few may occur later. Thinks the height of the spawning comes generally between November 4 and 10.

They never see the young in the spring.

Most of the shores in this part of the bay have the limestone ledges or flats, above described.

(This would be a most interesting place to study the spawning habits of the whitefish).

They do not see other fishes about these ledges.

It is only since they have planted fry in this region that they have seen the larger whitefish. The fishermen can distinguish between the native and the planted fish. The former do not grow above 4 pounds, and their scales are smaller. The planted fish come from Lake Erie.

He has never seen rough fish on the spawning grounds of the whitefish, but his experience is limited.

Plants of whitefish have been made all the way between Picton and the head of the Bay of Quinté.

During the past 20 years whitefish have never been so abundant as at present. During a part of this period, say about 15 years ago, they were so scarce that it did not pay to fish for them. Not a fisherman in this district who does not acknowledge the good that has resulted from planting fry.

Not over half a dozen salmon trout are taken in this district any fall. Some fry have been planted here, but not in the belief that they would stock this bay. .

Sea salmon have been taken as far up as Trenton, according to the statements of his father and of other fishermen. His father's experience would date back about 50 years.

They used to spear them, but he could not say how abundant they were, or the season when they occurred.

Hoop nets are set in Mosquito Bay, Mud Creek and a bay near North Pt. The season is from October 1 to April 15, but last year they began to set them July 1, the only time it has been allowed. They are continued set under the ice during the winter.

The fish taken in the hoop nets are bullheads, suckers, and some pike and perch. Black bass will not go into the places where these nets are set, but they will enter the hoop nets if they are set where they occur. Black bass will lead as readily as any fish. They will run onto the mud from about May 15 to about June 10, and perhaps somewhat earlier and later. For that reason it is perhaps best to continue to enforce taking up hoop nets April 15.

The quantity and value of the bullheads

taken in the hoop nets is greater than those of all the other kinds combined. The quantity of pike and suckers taken does not amount to much relatively, but an abundance of suckers could be taken if they paid; their value, however, is low.

Bullheads dressed sell at 5 cents per lb.

Whitefish round sell at 4 cents per lb.

He thinks the bass spawn when they go on the mud. There are also sandy places near at hand on which they go at the same time, and they perhaps also spawn on it. Many bass run up the rivers before they go on the mud. Does not know the reason.

Fish about here for eels during 4 to 6 weeks in the spring, beginning about May 1. Night lines are used. This is at the time when the "shad" begin to run, and these are used as bait for the eels.

Bullheads run up to 1 and 1 1/4 pounds. They lose about one-half in dressing.

There is much hook and line fishing through the ice for pickerel, which are mostly sent away to market.

The Buffalo Fish Co. takes nearly all the fish caught in this district except the herring

There are very few sturgeon in this district and they are not fished for. An occasional one is caught in the seines. The largest he knows of was taken some years ago and weighed 160 pounds. They are generally very much smaller than this.

There is a good deal of sport fishing for bass in this district, and some for maskinonge. A good many persons engage in this sport, including many strangers.

Not many bass are taken in the seines. Some are caught in the 4 1/2 inch gill nets. They sometimes fish for bass and pickerel with such nets or large herring nets. Very little complaint is made against the market fishermen

in this district, but the fishermen and sportsmen work pretty well together.

This part of the Bay of Quinté is the greatest spawning bed for whitefish, and they should have every protection here possible. It might be expedient to stop whitefishing here altogether, and this would not be a great hardship, to more than 2 or 3 fishermen in this district.

Thinks that hoop net fishing has been carried on somewhat illegally, but does not consider that this kind of fishing does any harm to the more important fishes. Thinks that it might even be beneficial to enlarge it, as it might be well to catch up more of the bullheads.

He is of the opinion that it would be best to stop all fishing for whitefish all through the bay up from the gap.

The whitefish are just coming into the bay. They come in here to spawn. The

protection should extend to the gap, and that would require an extension of the close season farther down. Would not be fair to shut off only his district. It would be drawing the line very sharp to do so.

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